

LATITUDE 38° 27' 30"

LONGITUDE 81° 00' 52" 18

NORTH

COLUMBIA GAS TRANSMISSION CORP.
(SURFACE & MINERAL)
FEE INT.

G.W. KEETEN

J. MITCHELL

BENCH MARK DESCRIPTION

STANDARD DISK STAMPED BLUE CREEK
1933 TOP SECOND STEP SKI WING WALL
OFF ABUTMENT AT N.Y. CENTRAL R.R.
BRIDGE OVER ELK RIVER ELEV. 616.35'

LAT. 38° 26' 19"
LONG. 81° 27' 24"

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
DRAWING NO. 12073
SCALE 1" = 400'
MINIMUM DEGREE OF
ACCURACY 1/200
PROVEN SOURCE OF
ELEVATION _____

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF ENERGY.
(SIGNED) [Signature]
R.P.E. 9936 L.L.S. 798

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE 9-13, 19 77
OPERATOR'S WELL NO. 12073
API WELL NO.

47 KAN 2798-T
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE X DEEP ___ SHALLOW ___
LOCATION: ELEVATION 744.50' WATERSHED BLUE CREEK
DISTRICT ELK COUNTY KANAWHA
QUADRANGLE BLUE CREEK

SURFACE OWNER COLUMBIA GAS TRANSMISSION CORP. ACREAGE 34
OIL & GAS ROYALTY OWNER COLUMBIA GAS TRAN. CORP. LEASE ACREAGE 34
LEASE NO. D-27464

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW
FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) STORAGE RECONDITION

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

TARGET FORMATION _____ ESTIMATED DEPTH _____
WELL OPERATOR COLUMBIA GAS TRANSMISSION DESIGNATED AGENT ROBERT C. WEIDNER
ADDRESS P.O. BOX 1273 CHARLESTON, W.V. 25325 ADDRESS P.O. BOX 1273 CHARLESTON, W.V. 25325

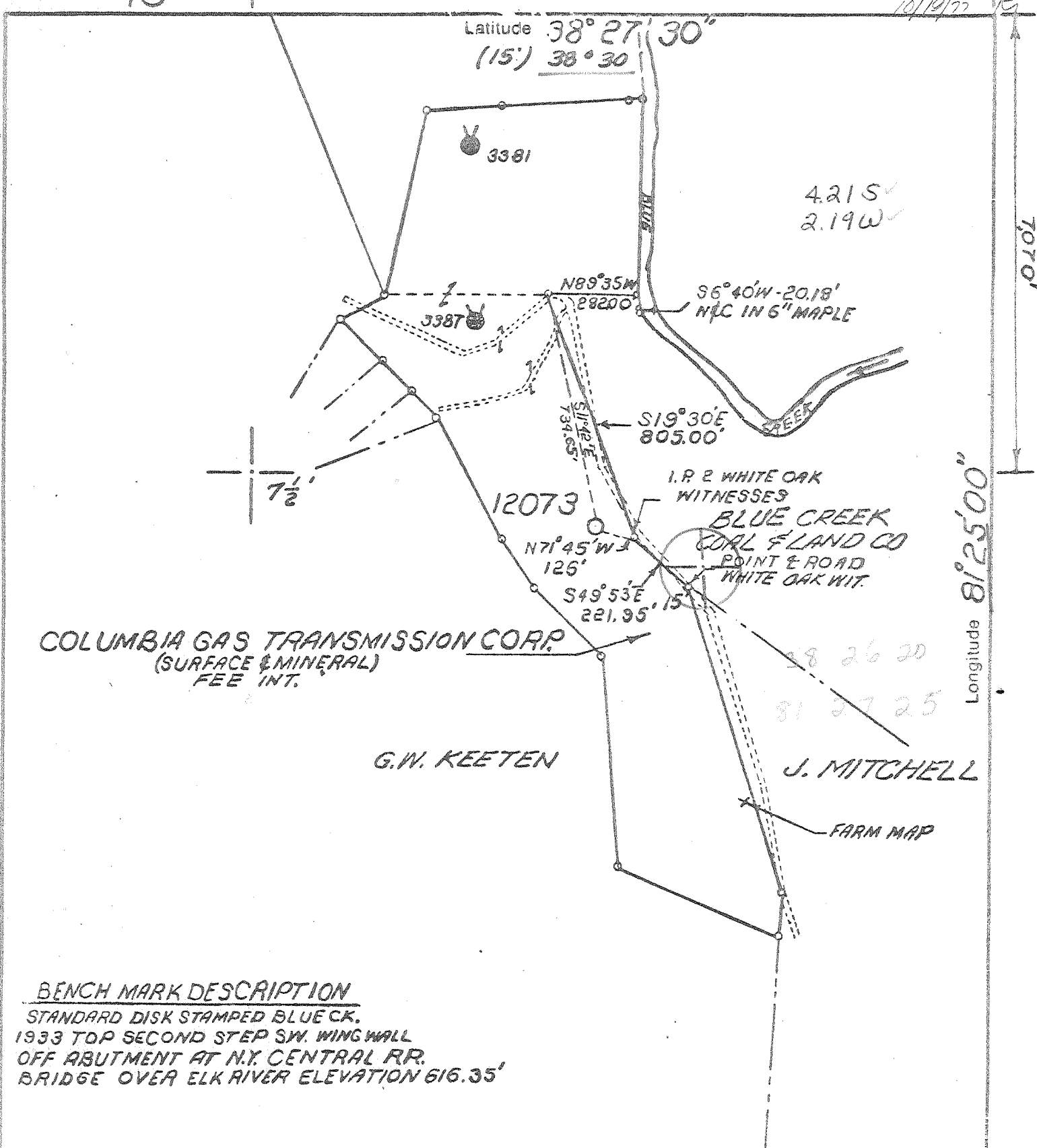
COUNTY NAME KAN PERMIT 2798-T

70

11,425'

10/19/77

65



COLUMBIA GAS TRANSMISSION CORP.
(SURFACE & MINERAL)
FEE INT.

G.W. KEETEN

J. MITCHELL

FARM MAP

BENCH MARK DESCRIPTION

STANDARD DISK STAMPED BLUE CK.
1933 TOP SECOND STEP SW. WING WALL
OFF ABUTMENT AT N.Y. CENTRAL RR.
BRIDGE OVER ELK RIVER ELEVATION 616.35'

- New Location
- Storage
- Drill Deeper
- Abandonment
- Re-Drill/Fracture

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by the rules and regulations of the oil and gas section of the mining laws of WEST VIRGINIA. Minimum degree of accuracy is one part in 200

ENGR. REG. NO. 2330
BOX 1273 CHARLESTON, W.VA.

Signed _____

Company COLUMBIA GAS TRANS. CORP.
 Address BOX 1273 CHARLESTON, W.VA.
 Farm COLUMBIA GAS TRANS. CORP.
 DEED 27464 FEE INT. Acres 34
 Well Farm No. _____ Ser. No. 12073
 Elevation - Spirit Level 744.58' NW
 Quadrangle BLUE CREEK, CLENDENIN 15'
 Township or District ELK
 County KANAWHA
 Sec., Lot, Qr. _____ T _____ R _____
 Coordinates LONG. -81° 27' 24" LAT. 38° 26' 19"
 File No. 70-65 Dwg. No. _____
 Date 9-13-77 Scale 1" = 400'

FORM 1495 CE 4 CSD

COLUMBIA GAS SYSTEM
COLUMBIA GAS TRANSMISSION CORPORATION
WELL LOCATION MAP

STATE OF WEST VIRGINIA

(+) Denotes Values Of Well On United States Topographic Maps.

KAN-2798

Scale 15' 7 1/2'

47-039 OCT 28 1977

Does Well 5257 9-6 Blue Creek (7.18)

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OIL & GAS DIVISION
DEPT. OF MINES



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary
Spudder
Cable Tools
Storage

Form OG-10

Quadrangle Blue Creek
Permit No. Kan. 2798

WELL RECORD 5

Oil or Gas Well Gas
(KIND)

Company Columbia Gas Transmission Corp.
Address P.O. Box 1273, Charleston, WV
Farm Columbia Gas Trans. Corp Acres 34
Location (waters) Blue Creek
Well No. 12073 Elev. 744.58'
District Elk County Kanawha
The surface of tract is owned in fee by Col. Gas. Trans.
Address _____
Mineral rights are owned by Col. Gas Trans.
Address _____
Drilling commenced Nov. 3, 1977
Drilling completed Nov. 18, 1977
Date Shot _____ From _____ To _____
With _____
Open Flow _____ /10ths Water in _____ Inch
_____ /10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure 1710 lbs. 24 hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) _____
WELL FRACTURED (DETAILS) Water-Frac-963 Bbls & 50,000# 20/40 SD

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13 3/8"	130'	130'	
XX9-5/8"	1924'	1924'	Size of
8 1/4"			
8 3/4" 7"	5125'	5125'	Depth set
5 3/16"			
4 1/2"			
3"			Perf. top
2 3/8"	5132'	5132'	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
Amount of cement used (bags) _____
Name of Service Co. Halliburton
COAL WAS ENCOUNTERED AT 70 FEET 120 INCHES
605 FEET 120 INCHES 660 FEET 60 INCHES
FEET INCHES FEET INCHES
WELL ACIDIZED (DETAILS) _____
WELL FRACTURED (DETAILS) Water-Frac-963 Bbls & 50,000# 20/40 SD

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 12.5 MMCF
ROCK PRESSURE AFTER TREATMENT 1710 HOURS 24
Fresh Water Sand & Sand&Shale Feet 85' to 605' Salt Water Salt Sand Feet 850' to 1350'
Producing Sand Oriskany Depth 5126' to 5150'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
nd & Shale			0	70			KB Measure 10' above GL
Coal	Black		70	80			
nd & Shale			80	605	Water		
Coal	Black		605	615			
Sand			615	660			
Coal	Black		660	665			
Sand			665	850			
lt & Sand	White		850	1330			
Shale	Black		1330	1470			
Lime	Gray		1470	1695			
jun Sand	Red		1695	1725			
il)Sd. and hale)			1725	1790			
Shale	Black		1790	1910			
Sand			1910	2100			
Shale			2100	5010			
oniferous Lime)	Gray		5010	5135			
riskany	White		5135	5180			
hale			5180	5222			
TD			5222				

HDBG?

5010
745
4255
5135-80
745
4390

MAR 30 1978

Formation	Color	Hard or Soft	Top 5	Bottom	Oil, Gas or Water	Depth Found	Remarks
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Cementing Record

13-3/8" Casing was cemented using 150 sks. neat cement at a depth of 130' by Halliburton on Nov. 5, 1977

9-5/8" Casing was cemented to a depth of 1924' using 600 sks. posimix and 100 sks. neat cement on Nov. 10, 1977 by Halliburton Ser.

7" Casing was set at 5125' using 200 sks. neat cement on Nov. 14, 1977, by Halliburton

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OIL & GAS DIVISION
DEPT. OF MINES

Date 3-6, 1978
 APPROVED [Signature], Owner
 By [Signature]
 (Title)

RECEIVED
 WV Division of
 Environmental Protection

State of West Virginia
 Division of Environmental Protection
 Section of Oil and Gas

JUN 22 1995

Well Operator's Report of Well Work

Permitting
 Farm name: COLUMBIA GAS TRANSMISSION Operator Well No.: COCO "C" 12073
 Office of Oil and Gas

LOCATION: Elevation: 744.58 Quadrangle: BLUE CREEK

District: ELK County: KANAWHA
 Latitude: 7070 Feet South of 38 Deg. 27Min. 30 Sec.
 Longitude 11425 Feet West of 81 Deg. 25 Min. Sec.

NOTE: NO NEW CASING WAS USED ON HORIZONTAL

Company: COLUMBIA GAS TRANSMISSION
 1700 MaccORKLE AVENUE S.E.
 CHARLESTON, WV 25314-0000

Agent: R. L. COTY

Inspector: CARLOS HIVELY
 Permit Issued: 10/04/93
 Well work Commenced: 10/8/93
 Well work Completed: 11/20/93
 Verbal Plugging
 Permission granted on: _____
 Rotary _____ Cable _____ Rig _____
 Total Depth (feet) _____
 Fresh water depths (ft) +/- 85' TO

605'
 Salt water depths (ft) +/- 850' TO
1350'

Is coal being mined in area (Y/N)? N
 Coal Depths (ft): 70', 605', 660'

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 13-3/8"			TO SURFACE
H-40 #48	NONE	130'	
9-5/8"			TO SURFACE
H-40 #32	NONE	1924'	
7"			
N-80 #23	NONE	5126'	4104'
6" OPEN HOLE	HORIZONTAL WAS LEFT AS AN OPEN HOLE COMPLETION.		

*WELL STILL CLEANING UP THE 3% KCL DRILL WATER.

OPEN FLOW DATA

Producing formation ORISKANY STORAGE Pay zone depth (ft) 5147'-5164'
 Gas: Initial open flow 23.4 MMCF/d Oil: Initial open flow _____ Bbl/d
 1385 PSIG *Final open flow _____ MCF/d Final open flow _____ Bbl/d
 FWHP Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: COLUMBIA GAS TRANSMISSION CORP.

By: R. L. COTY
 Date: 6/20/95

JUN 23 1995



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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OCT 19 1977

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE October 17, 1977

Surface Owner Columbia Gas Transmission Corp.

Company Columbia Gas Transmission Corp.

Address P. O. Box 1273, Charleston, W. Va. 25325

Address P. O. Box 1273, Charleston, W. Va. 25325

Mineral Owner Same As Above

Farm Columbia Gas Trans. Corp. Acres 34

Address _____

Location (waters) Blue Creek

Coal Owner Same As Above

Well No. 12073 Elevation 744.58'

Address _____

District Elk County Kanawha

Coal Operator Not Operated

Quadrangle Blue Creek

Address _____

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 2-21-78.

INSPECTOR
TO BE NOTIFIED Martin Nichols

ADDRESS P. O. Box 554, Clendenin, W. Va.

Deputy Director - Oil & Gas Division

PHONE 548-6993

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated November 1 1928 by Ohio Fuel Gas Company made to United Fuel Gas Company and recorded on the _____ day of _____ 19____, in _____ County, Book 337 Page 2
 NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

Very truly yours,
(Sign Name)
Director Well Operator

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Exploration and Development
P. O. Box 1273
Street
Charleston,
City or Town
West Virginia 25325
State

BLANKET BOND

KAN-2798 PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

47-039

Signed by
Director, Exploration and Development

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME _____ NAME Larry Friend
 ADDRESS _____ ADDRESS P.O. Box 610, Clendenin, W. Va.
 TELEPHONE _____ TELEPHONE (304) 965-3317
 ESTIMATED DEPTH OF COMPLETED WELL: 5257' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS _____ COMB. _____ STORAGE DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16	30'		
13 - 10 3/8	250'		
9 - 5/8	2050'		
8 - 5/8			
7	5150'		
5 1/2			
4 1/2			
3			Perf. Top
2 3/8	5150'		Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title